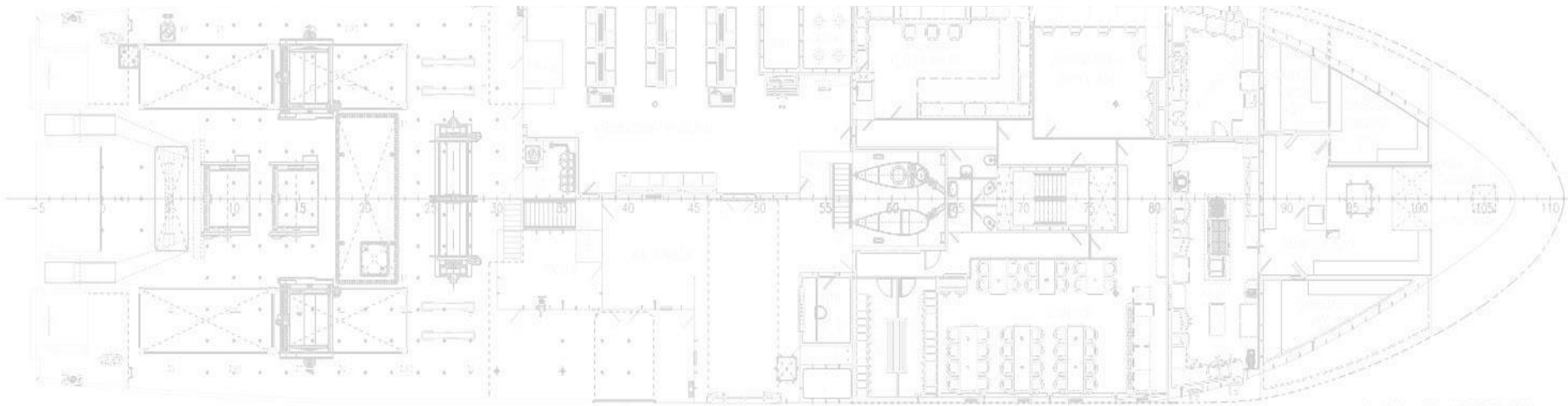




***Protocols and Covid issues
onboard the Spanish RV fleet.
Lessons learned***

- 
- ✓ *Prevention Service and Health Surveillance at the Spanish National Research Council (CSIC)*
 - ✓ *Covid Protocols on Unidad de Tecnología Marina (UTM) vessels*
 - ✓ *Covid management*
 - ✓ *Lessons learned*



1.1 CSIC

CSIC

*Spanish
National
Research
Council*
www.csic.es

UTM

*Unidad de
Tecnología
Marina*
www.utm.csic.es

*68 own centers, institutes and units
52 centers shared with other entities
In 2022:*

- ✓ *13.935 workers*
- ✓ *Spanish fleet 9 (2 UTM + 5 IEO)*

B/O Sarmiento de Gamboa (SdG)



B/O García del Cid (GdC)



B/O Hespérides



1.2 Prevention Service and Health Surveillance at CSIC

European Union law

*Council Directive of 12 June 1989
89/391/EEC*

*Directives:
92/85/EEC,
94/33/EEC
91/383/EEC*

Spain

Law 31/1995

The CSIC Prevention Area has six own Prevention Services (SPP) distributed in 6 geographical areas:

- SP de Aragón/Zaragoza*
- SP de Cataluña y Baleares*
- SP de Granada*
- SP de Sevilla*
- SP de Valencia*
- SP y SL de Madrid*



*RD 67/2010 y
RD 1084/2014
prevention
legislation for
the general
administration of
the state*

1.2 Prevention Service and Health Surveillance at CSIC

UTM

- ✓ Direction team
- ✓ Prevention department

CSIC Prevention Service

- ✓ Prevention Technicians
- ✓ Area manager

CSIC Health Surveillance

- ✓ Work medicine specialist
- ✓ Nurses

*COVID protocols on board the
B/O Sarmiento de Gamboa and
García del Cid*

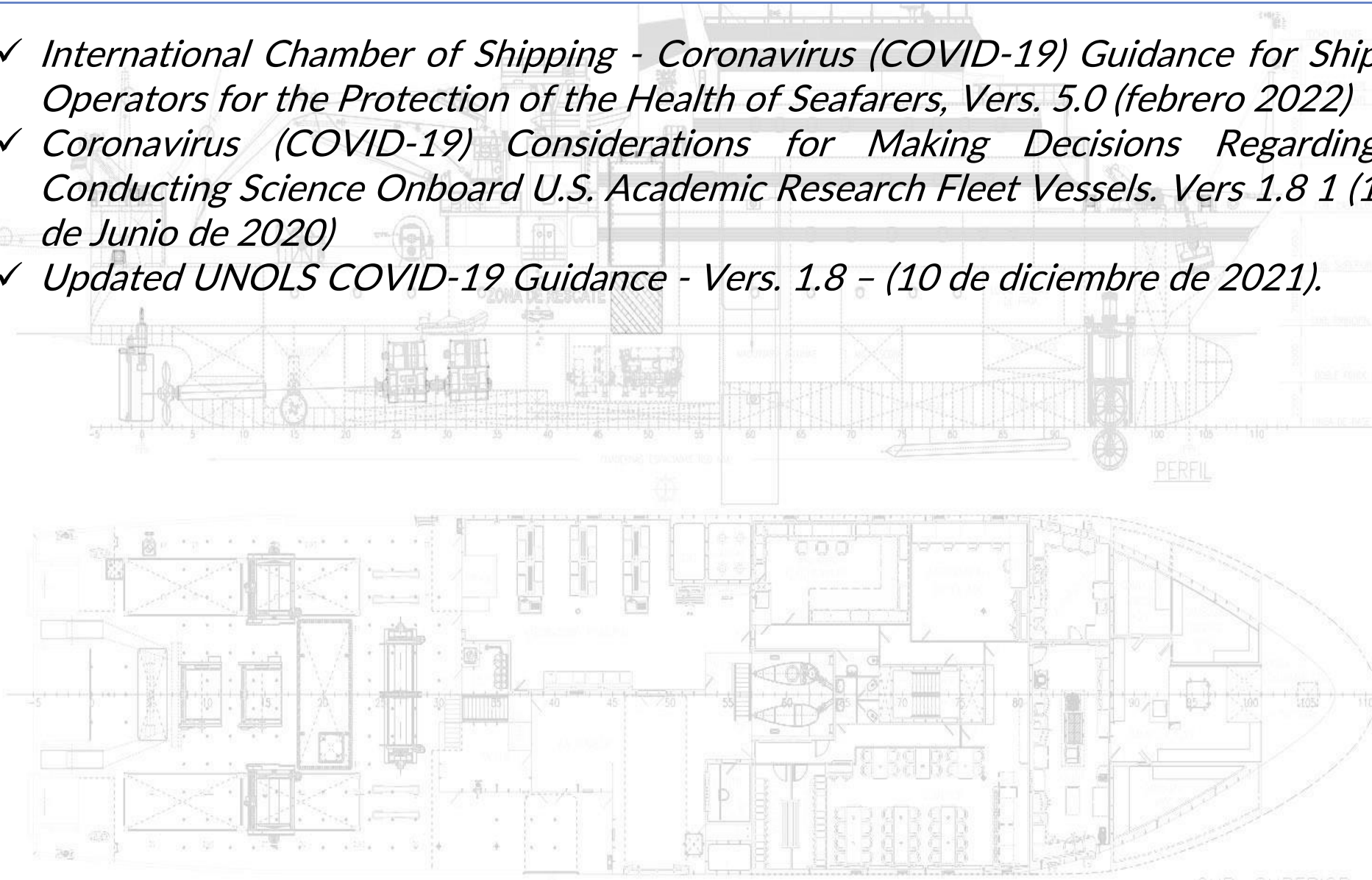
- ✓ Prevention Delegates
- ✓ Workers
- ✓ Participants of the oceanographic survey

1.3 State of the art in Spanish Regulations and references

- ✓ *Procedimiento de actuación para los servicios de prevención de riesgos laborales frente a la exposición al SARS-COV-2 (5 de mayo de 2022). Ministerio de Sanidad. Subdirección General de Sanidad Ambiental y Salud Laboral. Dirección General de Salud Pública, Calidad e Innovación.*
- ✓ *Real Decreto 286/2022, de 19 de abril, por el que se modifica la obligatoriedad del uso de mascarillas durante la situación de crisis sanitaria ocasionada por la COVID-19*
- ✓ *Medidas para mantener el control de la incidencia de los casos covid-19 en la ae csic (20/04/2022)*
- ✓ *Ministerio de Sanidad, Instituto de Salud C-III. Estrategia de vigilancia y control frente a covid-19 tras la fase aguda de la pandemia, actualización 23 de marzo de 2022*
- ✓ *Ministerio de Sanidad, Consejo Interterritorial de Sistema Nacional de Salud. Estrategia de vacunación frente a COVID-19 en España. Grupo de Trabajo Técnico de Vacunación COVID-19, de la Ponencia de Programa y Registro de Vacunaciones, Actualización 11, 8 de febrero de 2022.*
- ✓ *<https://www.sanidad.gob.es/profesionales/saludPublica/ccayes/alertasActual/nCov/vacunaCovid19.htm>*

1.4 State of the art in International Regulations and references

- ✓ *International Chamber of Shipping - Coronavirus (COVID-19) Guidance for Ship Operators for the Protection of the Health of Seafarers, Vers. 5.0 (febrero 2022)*
- ✓ *Coronavirus (COVID-19) Considerations for Making Decisions Regarding Conducting Science Onboard U.S. Academic Research Fleet Vessels. Vers 1.8 1 (1 de Junio de 2020)*
- ✓ *Updated UNOLS COVID-19 Guidance - Vers. 1.8 - (10 de diciembre de 2021).*



2. Covid protocols on UTM vessels

2.1 Objectives of Protocols and procedure

The goals of the protocols are:

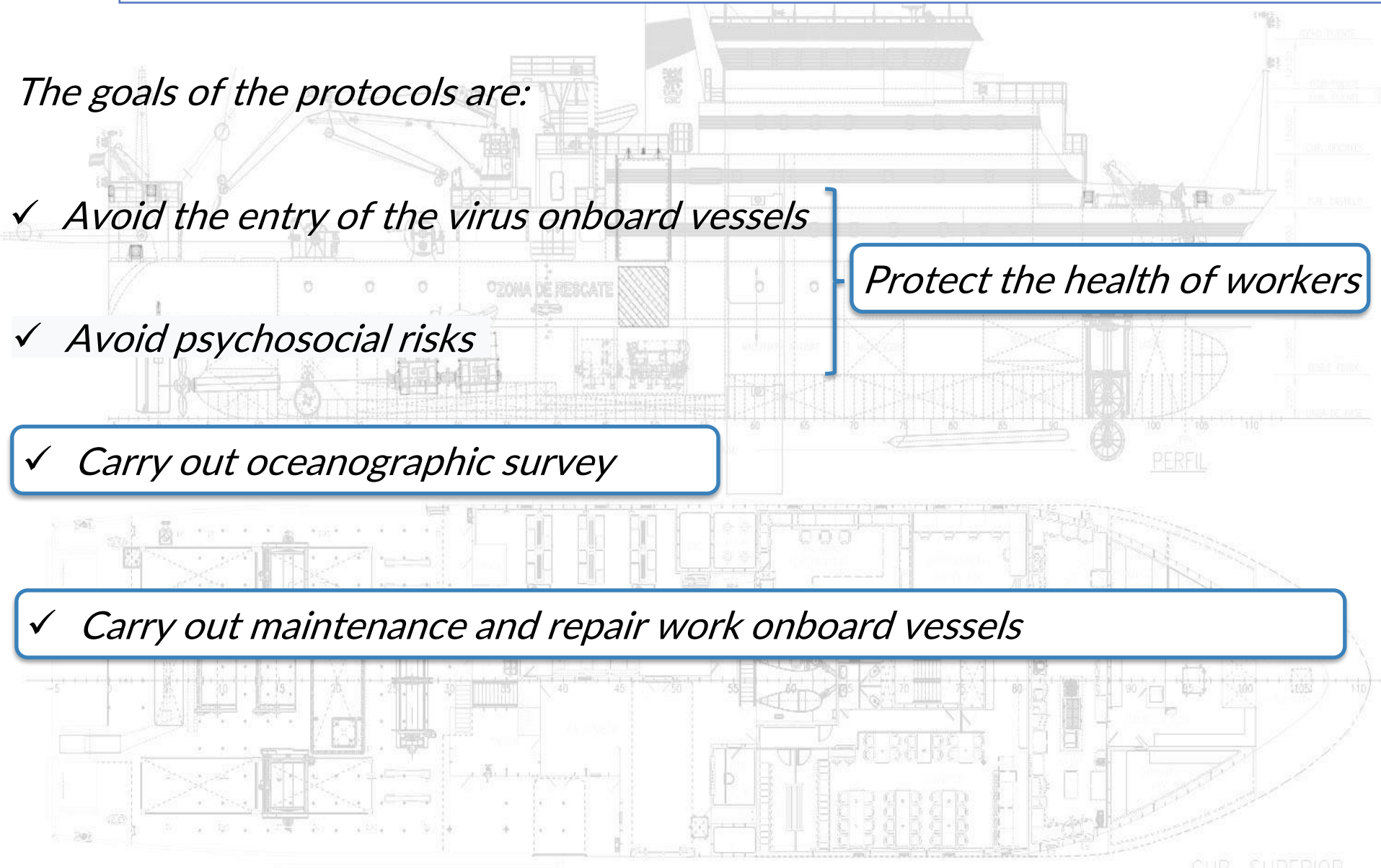
✓ *Avoid the entry of the virus onboard vessels*

✓ *Avoid psychosocial risks*

✓ *Carry out oceanographic survey*

✓ *Carry out maintenance and repair work onboard vessels*

Protect the health of workers



2. Covid protocols on UTM vessels

2.2 Protocols evolution

1. Protocol focused to avoid the entry of the virus onboard vessels and actions in case of COVID positive

June 2020

Protocol and measures in relation to COVID-19 for the development of oceanographic survey on CSIC vessels



July 2021

Update of the protocols for boarding on CSIC vessels regarding the status of the Covid-19 vaccination

Revision I: September 2021

Revision II: January 2022

Revision III: May 2022

Revision IV: pending review in this month

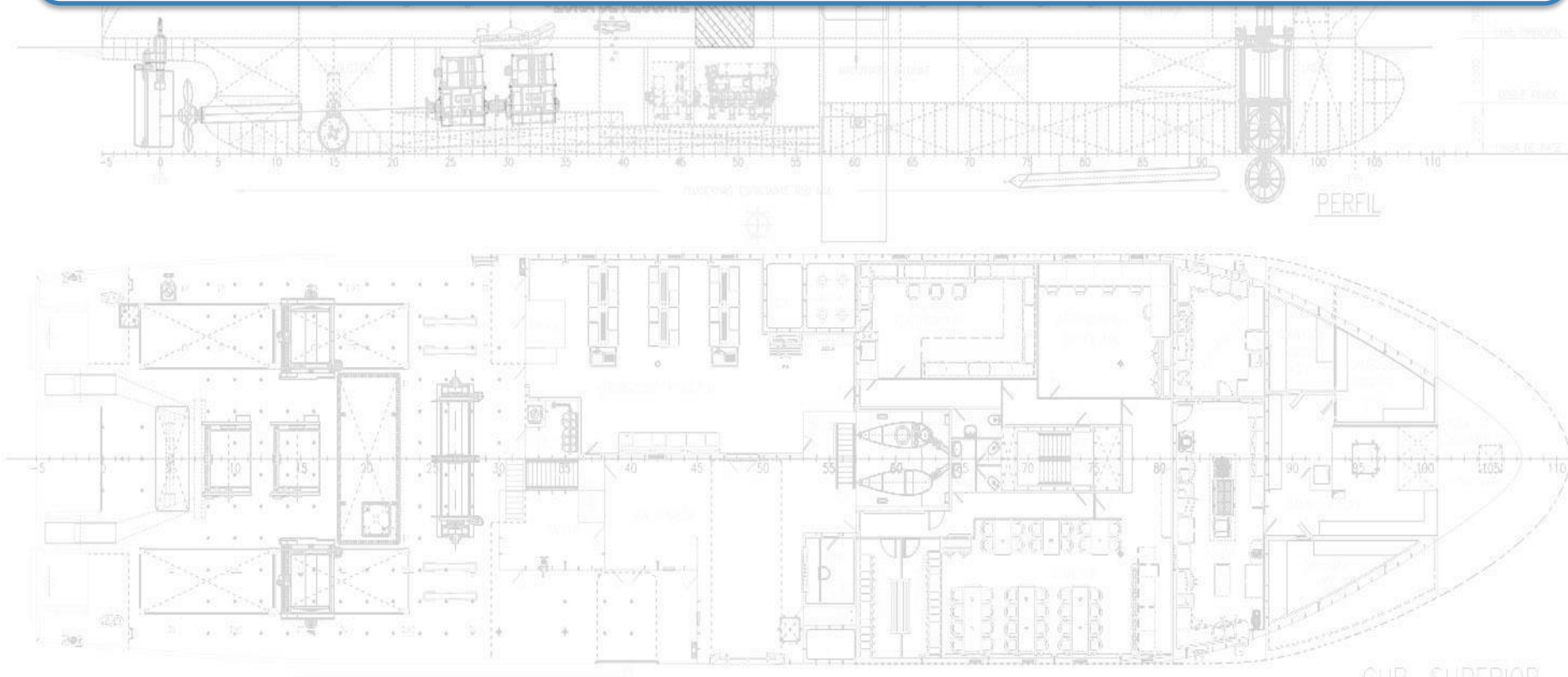
2. Covid protocols on UTM vessels

2.2 Protocols evolution

2. Protocol focused on how workers should act during quarantines

March 2022

Covid Action Protocol during quarantine prior to shipment



2. Covid protocols on UTM vessels

2.3 Protocol summary

Protocol focused to avoid the entry of the virus on board vessels

*Oceanographic survey are classified into **three levels** based on different factors:*

- ✓ *Distance to the coast, nearest port*
- ✓ *Oceanographic survey duration*
- ✓ *Vessel occupancy*
- ✓ *Boarding at international port*
- ✓ *Sensitive staff*
- ✓ *Worker vaccination status*



Level 1: High Risk survey

Level 2: Medium Risk survey

Level 3: Low Risk survey

2. Covid protocols on UTM vessels

2.3 Protocol summary

All staff
vaccinated

Level 1: High Risk survey

Quarantine: 7 days at home+ 2 days at hotel

PCR: at the beginning and at the end of the quarantine

Level 2: Medium Risk survey

Quarantine: 2 days at hotel

PCR: before boarding, after quarantine

Level 3: Low Risk survey

Quarantine: 1 day at hotel

PCR: before boarding, after quarantine

Level 1: High Risk survey

Quarantine: 7 days at hotel (v), 15 days at hotel (u)

PCR: at the beginning and at the end of the quarantine

Level 2: Medium Risk survey

Quarantine: 3 days at hotel (v), 7 days at hotel (u)

PCR: before boarding, after quarantine

Level 3: Low Risk survey

Quarantine: 1 day at hotel (v), 3 days at hotel (u)

PCR: before boarding, after quarantine

With
unvaccinated
staff

3. Covid management

3.1 Cases in the B/O Garcia del Cid



Year of built: 1977

Vessel dimensions (length): 37,200 m

CSIC crew

Number of cabins: 12

Max occupancy: 14+12 (26)

Has been operative since 09/2020

3.1 Cases in the B/O Garcia del Cid

✓ *2020: no case detected*

✓ *2021: no case detected*

✓ *2022:*

1) March:

A worker presents symptoms during a oceanographic survey. Antigen test is performed and comes out positive.

Vessel occupancy: 13 crew members, 3 UTM technicians and 9 members (scientists and students).

Actions:

- *vessel returns to port*
- *PCR on arrival (everybody)*
- *the positive worker stayed in a hotel for 7 days and then returned home*
- *vessel cleaning and disinfection*
- *Repeat PCR (UTM workers: crew and technicians)*
- *10 days later the crew returns to the vessel after another PCR*

3. Covid management

3.1 Cases in the B/O Garcia del Cid

2) May:

After the vacation period, before boarding, confinement + PCR is performed on the entire crew. A positive is detected. The rest of the crew was able to onboard.

3) June:

During maintenance operations the ship is moored in the port of Vigo. Three positives detected.

Actions:

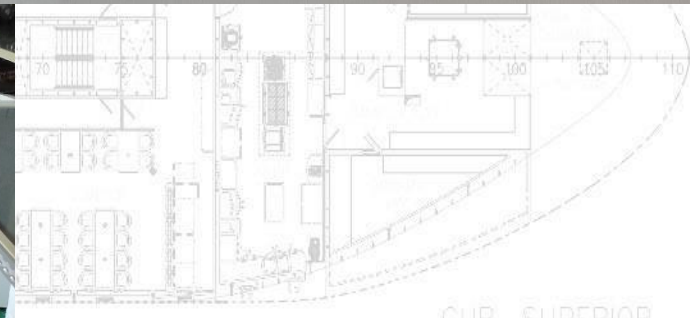
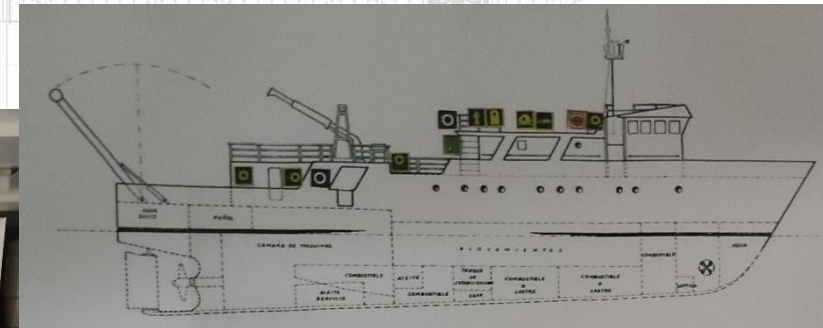
- *The positives are sent to hotels or to their homes depending on the personal situation of the worker.*
- *PCR to the rest of the workers.*
- *The crew with a negative result is sent to a hotel. The captain and a sailor (also negative) remain onboard the vessel*
- *Repeat PCR to all workers and the crew returns to GdC*

3. Covid management

3.1 Cases in the B/O Garcia del Cid

Problems:

- ✓ *There is only one crew*
- ✓ *Short oceanographic survey*
- ✓ *Constant movement of people*
- ✓ *Small vessel*
- ✓ *Difficulty in applying the protocols*



3. Covid management

3.2 Cases in the B/O Sarmiento de Gamboa



Year of built: 2006
Maximum Length: 70,500 m
Crew external to the CSIC
Number of cabins: 26
Max Crew: 16
Scientists and Technicians: 26
Has been operative since 06/2020

3.2 Cases in the B/O Sarmiento de Gamboa

- ✓ *2020: no case detected*
- ✓ *2021: no case detected*
- ✓ *2022:*

1) May:

Before the start of the survey, confinement and PCR are carried out. 3 positive cases of COVID are detected.

Actions:

- *The positives are sent to hotels or to their homes depending on the personal situation of the worker*
- *The workers with a negative result is sent to a hotel.*
- *Repeat PCR to all workers and come back to SDG*
- *The oceanographic survey had to be delayed a few days*

3. Covid management

3.3 Cases in other vessels that are not from the UTM

BIO Hespérides



Navy-owned vessel
Year of built: 1991
Maximum Length: 82,5 m
Crew external to the CSIC
Scientists and Technicians: 37
Max Crew:56
Has been operative since 02/2021
Its protocols are those applied by the navy

3. Covid management

3.3 Cases in other vessels that are not from the UTM

✓ 2020: inoperative

✓ 2021:

February:

Sergeant crew died (coronavirus outbreak that affected up to 60 % of the crew).

✓ 2022:

1) February:

Two days after leaving Punta Arenas to carry out a oceanographic survey, a positive was detected among the crew.

Vessel UTM occupancy: 8 technicians

Actions:

- *The vessel moved to Ushuaia*
- *PCR on arrival (everybody)*
- *The survey was suspended*
- *Between February 23 and March 1, civil and military personnel had to remain on the vessel*
- *In a second PCR the number of cases increased*
- *As of March 1 civilian personnel continued the quarantine on Argentine soil*

4. Lessons learned


4.1 Covid vaccine

<i>Issue</i>	<i>Actions</i>
<i>vaccine administration</i>	<ul style="list-style-type: none">✓ <i>variation of the quarantine and protocols according to the vaccination status of the staff</i>

4.2 Quarentine

<i>Issue</i>	<i>Actions</i>
<i>psychosocial risk</i>	<ul style="list-style-type: none">✓ <i>constant review of the protocol to find a balance between minimizing risk and avoid entering virus on board vessels.</i>✓ <i>inform workers about the duration of the quarantine and provide tools to manage this</i>✓ <i>provide psychosocial support program to workers</i>
<i>carry out with the protocols (It is not possible to ensure compliance with quarantines)</i>	<ul style="list-style-type: none">✓ <i>appeal to individual responsibility</i>✓ <i>constant review of protocols to adapt to the situation</i>

4.3 Evolution of the pandemic

<i>Issue</i>	<i>Actions</i>
<i>relaxation of the environment try to avoid psychosocial risk</i>	<ul style="list-style-type: none">✓ <i>PCR before boarding</i>✓ <i>Treat each situation individually with health surveillance</i>
 <i>Appearance of COVID</i>	

4.3 Covid positive management

<i>Issue</i>	<i>Actions</i>
<i>positive cases detected</i>	<ul style="list-style-type: none">✓ <i>Emergency meeting for evaluation</i>✓ <i>Treat each situation individually with CSIC Health Surveillance and Prevention Service</i>✓ <i>Review of protocols</i>

Conclusions

- ✓ *Collaboration with Prevention Service and Health Surveillance at CSIC is very important*
- ✓ *The priority objective is to avoid the entry of the virus on board vessels (protect the health of workers) and carry out oceanographic survey*
- ✓ *Psychosocial risk has been identified*

increased quarantine and measures

introduces preventive measures to reduce psychosocial risk

decrease Covid cases

Increased Psychosocial Risk

- ✓ *Constant review of the protocols is necessary*
- ✓ *There is difficulty in complying with the protocols*

